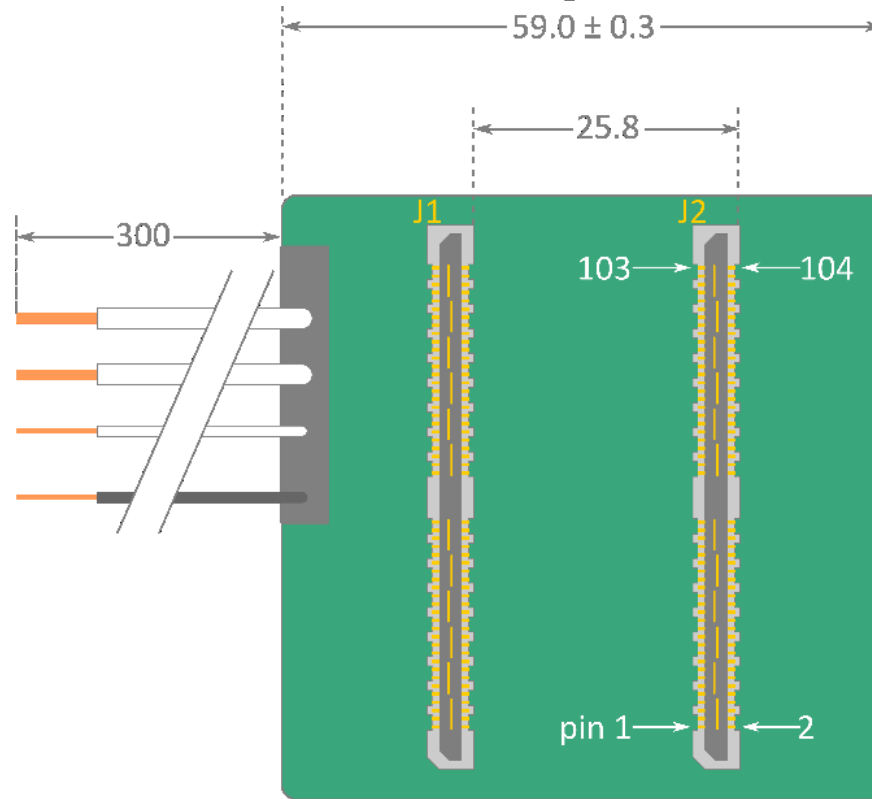


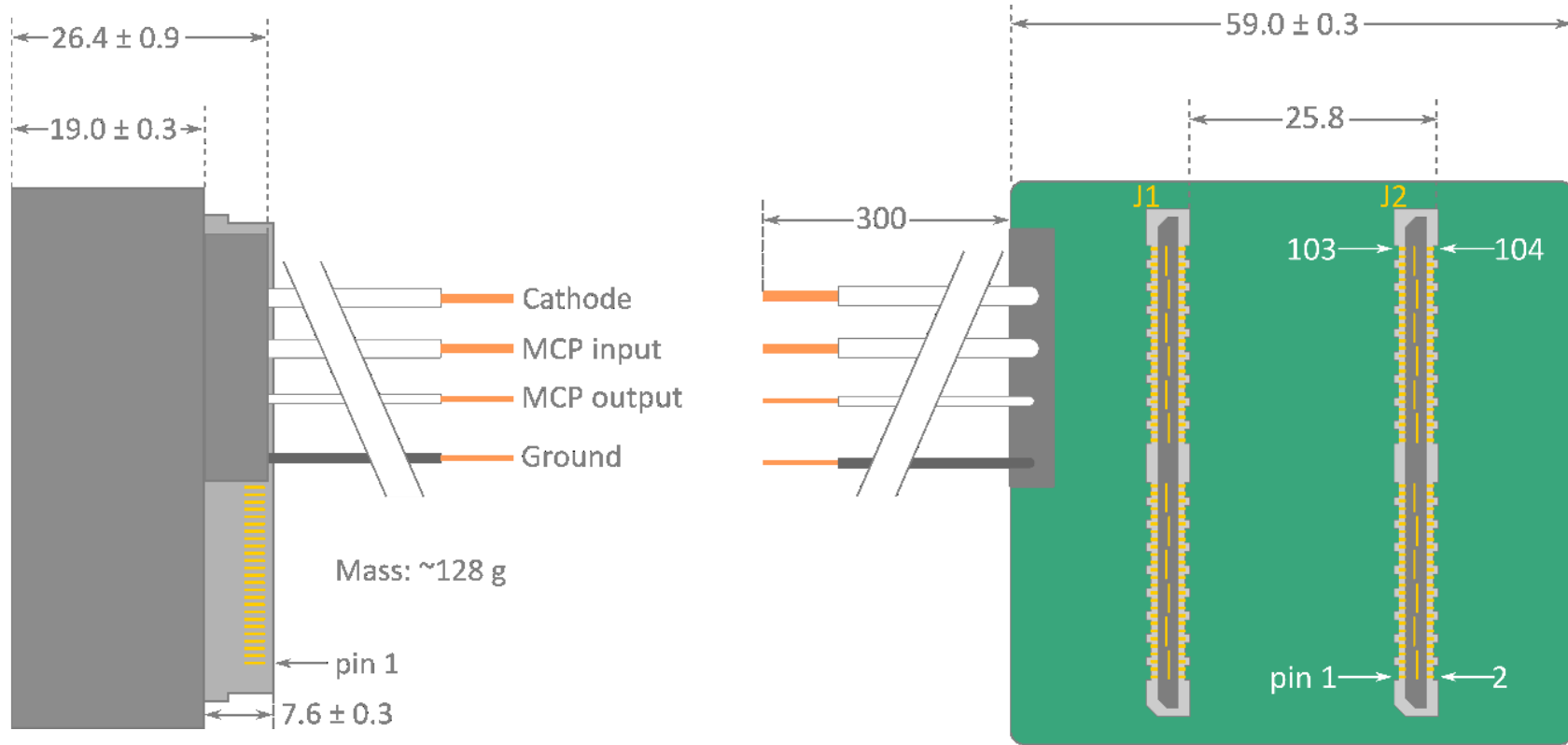
# Plans for the next DiRICH backplane



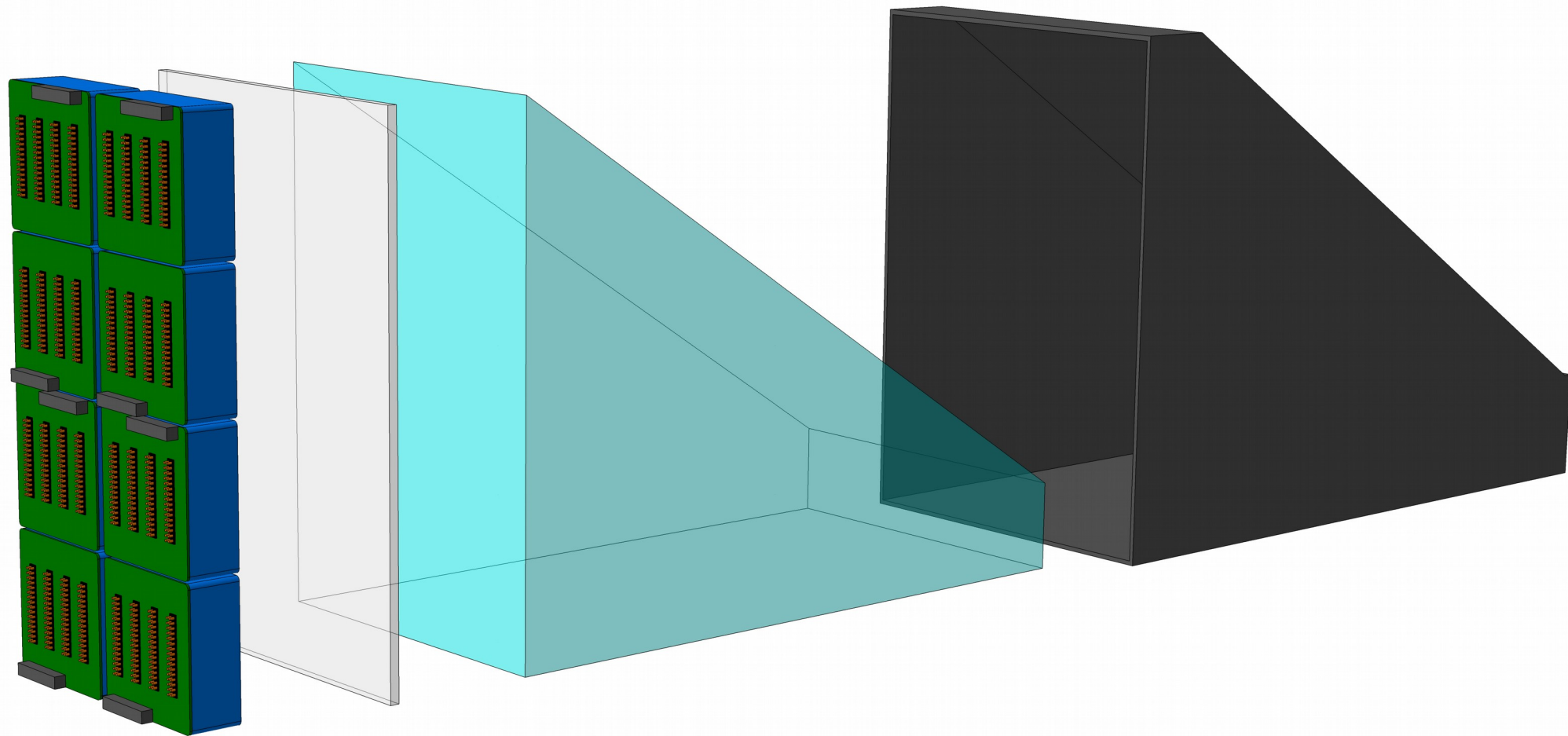
PHOTONIS  
XP85112-S-BA

New configuration with SAMTEC plugs need a new backplane

<https://www.samtec.com/products/qrm8-052-05.0-l-d-a-k-tr>

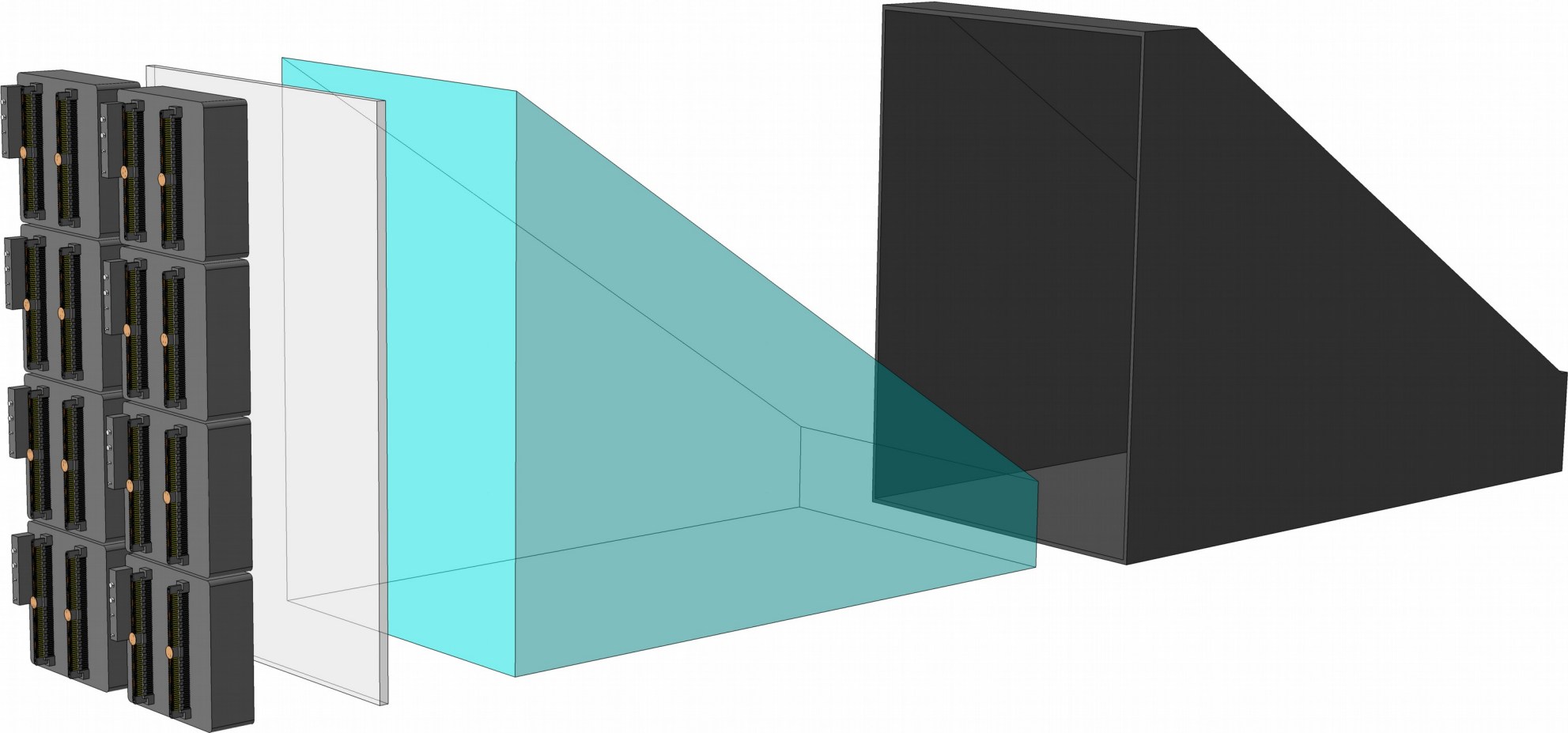


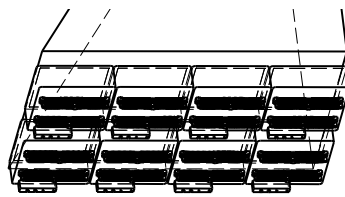
old



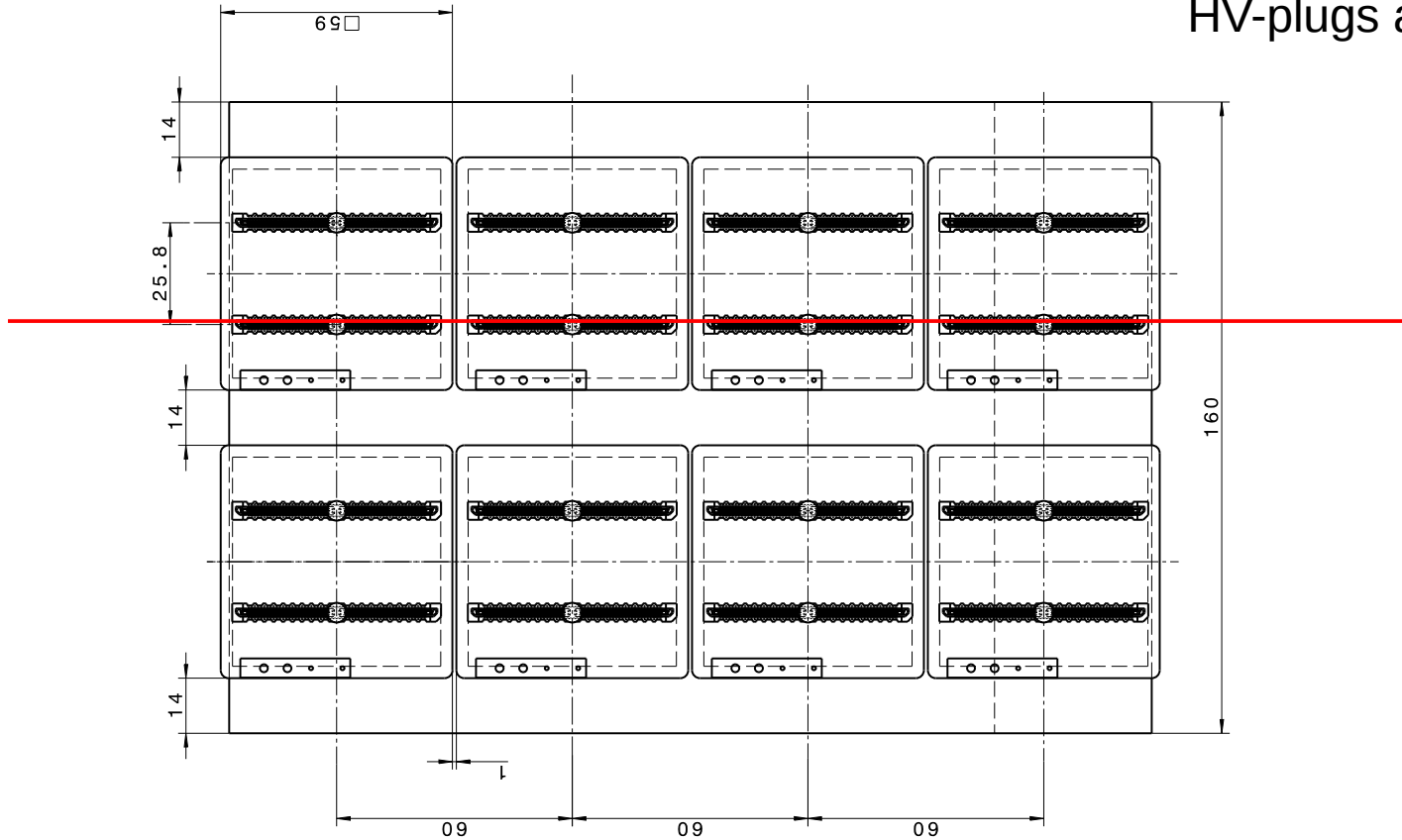
Technical drawings all from Andreas Gerhardt

new

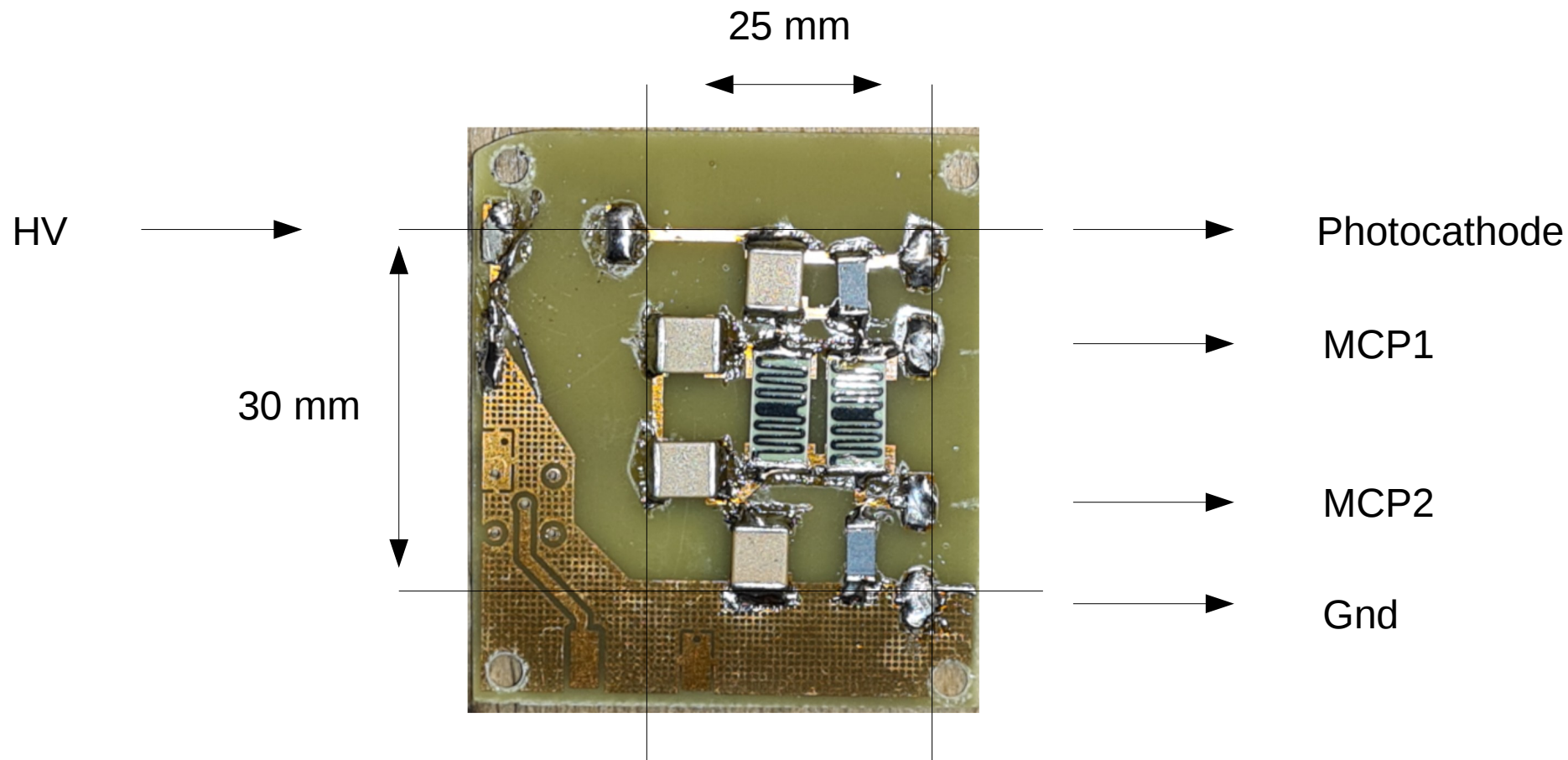




Two backplanes,  
HV-plugs at inside or outside



## Present HV-divider with SMD parts



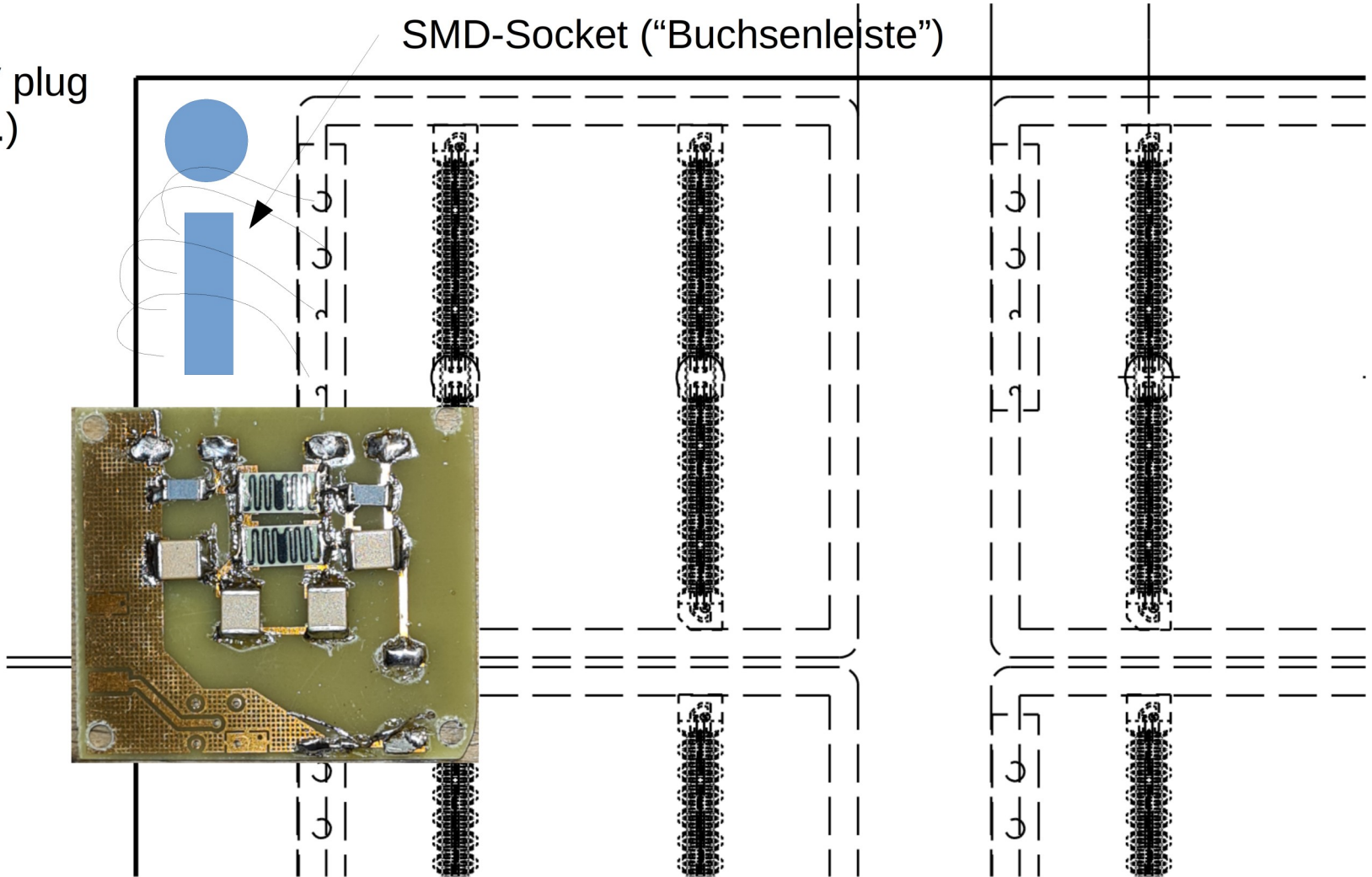
Hole for HV plug  
(10 mm dia.)

SMD-Socket ("Buchsenleiste")

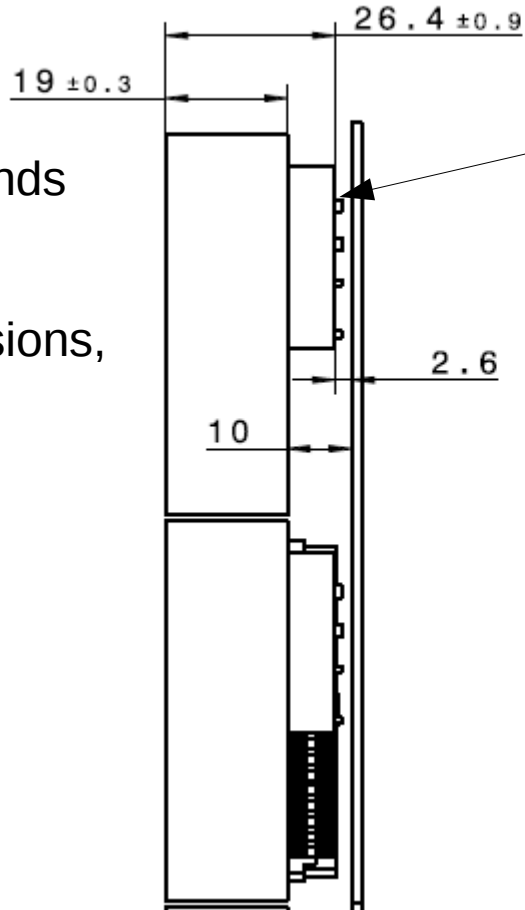
### Dimensions

- HV-divider
- PMT
- plug hole

scale



stack height = 10

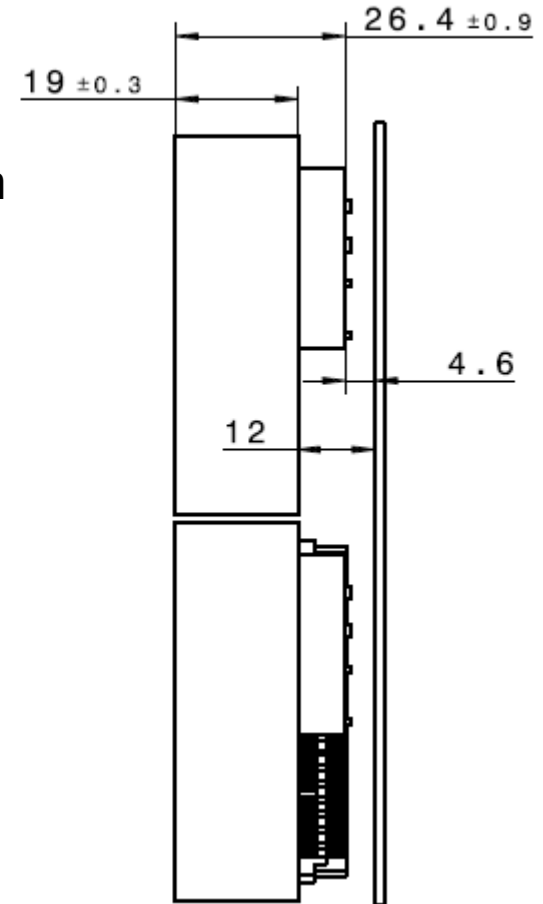


Stack height depends  
on socket version.

There are two versions,  
10 and 12 mm.

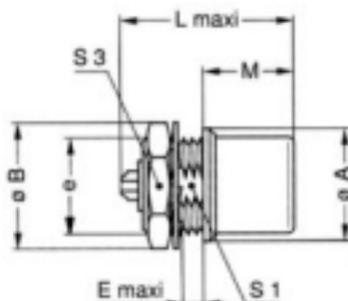
Bended cable  
just fits between  
plug and board

stack height = 12





## Candidate for socket



### EHP Fixed socket, nut fixing, protruding shell

Reference		Dimensions (mm)								
Model	Series	A	B	e	E	L	L'	M	S1	S3
EHP	0S ✓	10	12.5	M9x0.6	2.5	17.5	18.5	12.5	8.2	11
EHP	1S ✓	14	16.0	M12x1.0	3.5	20.2	21.5	12.0	-	14
EHP	3S ✓	22	25.2	M18x1.0	4.0	29.0	30.0	18.7	-	22

Note: \* unipole model

20

✓ Bei Lemo vorhanden | available at Lemo

5 kV

( HV within FR4 board 30 kV/mm → 16 planes:  $1.5\text{mm}/32 = 47\mu\text{m}$  → 1.4 kV  
→ 8 planes:  $1.5\text{mm}/16 = 94\mu\text{m}$  → 2.8 kV )

## Summary

First idea to include HV-divider on backplane.

Options to discuss:

- which socket? (Lemo, S-HV)

- each MCP one plug?

It is possible to add plug and divider parts later and use hole for cables